

Investor Briefing

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Date 10/30/99 Reporter QaQ



October 18, 1999

No. 211

SBC Announces Sweeping Broadband Initiative

**First major post-merger initiative
involves planned \$6 billion investment
over three years**

On October 18, 1999, SBC announced its first major initiative from the merger with Ameritech. The initiative, called Project Pronto, involves the company's entire 13 state in-region territory, and is designed to transform SBC into a broadband service provider capable of meeting all customers' needs for data, voice and video products. SBC plans to invest more than \$6 billion over the next three years in fiber, electronics and ATM technology in order to create a robust, comprehensive, data-centric broadband network architecture.

This initiative will dramatically improve SBC's cost structure, while greatly expanding the company's ability to deliver broadband services to all its customers.

SBC's broadband initiative is much more than a local loop or DSL strategy. These investments will make broadband the standard for SBC's network, fundamentally changing the way the company operates. In addition, the investments will position SBC to effectively and efficiently capitalize on changes in technology, as well as changes in customer demand.

The time is right to make these significant investments. The performance of broadband technologies has improved dramatically while the associated

"The network efficiency improvements alone pay for this initiative, leaving SBC with a data network that will be second to none."

costs have declined. Customer demand for broadband services is real and growing rapidly. Cumulatively, these factors present SBC with a compelling business opportunity. The network efficiency improvements alone will pay for this initiative, leaving SBC with a data network that will be second to none in its ability to satisfy the exploding demand for broadband services. This new network structure, combined with SBC's partnership with Williams Communications — which is the nation's newest, most advanced long-distance network — enables

the company to deliver end-to-end broadband services locally, throughout its markets and to the 30 out-region markets SBC plans to enter.

\$6 Billion Network Investment

Of the \$6 billion that SBC plans to invest over the next three years, 75 percent will be directed toward improvements to the basic local loop infrastructure (i.e., fiber feeder and next-generation remote terminals). The remaining 25 percent will fund other infrastructure improvements, especially in the tandem and interoffice network. Upon completion, SBC's next-generation network will be capable of meeting customers' voice, data and video needs with the right technology, at the right speeds and with the right reliability.

SBC's new network architecture is designed to be optimum from both a voice and data perspective. It will be scalable, with the capability to manage the ongoing shift in voice and data traffic volumes. Voice traffic today is predominantly circuit switched,

but this network deployment will give SBC the flexibility to readily move to other voice protocols, including voice over ATM, voice over ADSL and, ultimately, voice over IP. Data traffic will be diverted from the circuit-switched network, packetized and adapted to Internet Protocol. This approach to voice and data traffic will allow SBC to fully utilize the capacity of the existing circuit-switched network, while focusing ongoing capital expenditures on data capabilities.

Project Pronto Highlights

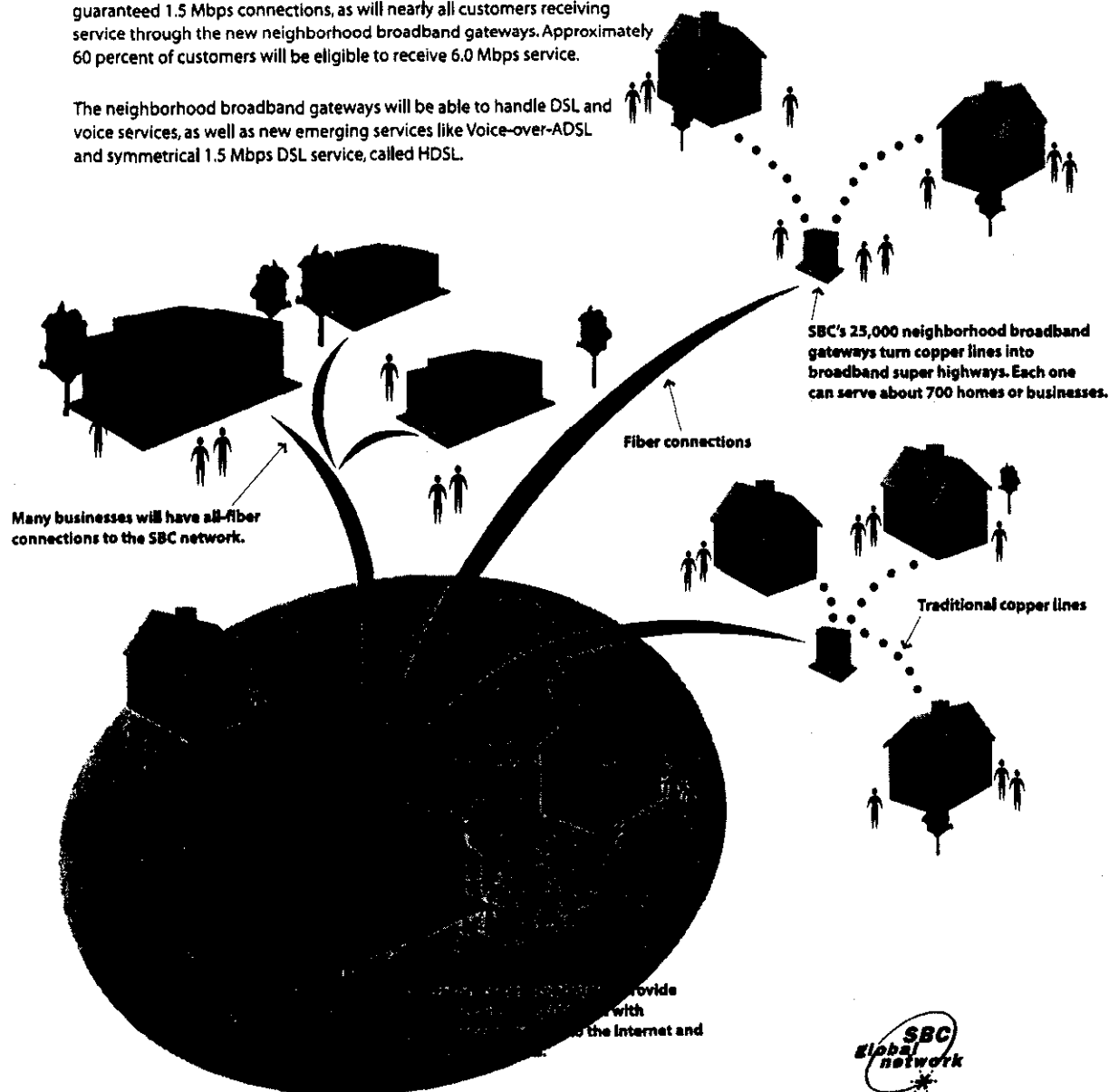
- \$6 billion capital investment
- Annual savings of \$1.5 billion by 2004
- Capital and expense savings pay for initiative on NPV basis
- \$3.5 billion in new revenue by 2004
- 100 basis-point improvement in annual revenue growth
- Significant value creation, well in excess of \$10 billion NPV

The higher speeds afforded by these network improvements will enable SBC to offer a myriad of Internet-based video products — including video streaming and video conferencing — on its landline networks. These network improvements also will allow SBC

SBC will deploy fiber deeper into neighborhoods and equip them with neighborhood broadband gateways, putting network capabilities closer to customers and making super-fast Internet access widely available.

Customers within 12,000 feet of a central office facility will receive guaranteed 1.5 Mbps connections, as will nearly all customers receiving service through the new neighborhood broadband gateways. Approximately 60 percent of customers will be eligible to receive 6.0 Mbps service.

The neighborhood broadband gateways will be able to handle DSL and voice services, as well as new emerging services like Voice-over-ADSL and symmetrical 1.5 Mbps DSL service, called HDSL.



to provide television entertainment as the technology evolves and becomes financially feasible to implement. SBC will also have the flexibility to continue to offer video and Internet services using satellite transmission through its strategic marketing and distribution agreement with DIRECTV™.

Loop Infrastructure

SBC plans to invest approximately \$4.5 billion to initially extend the reach of broadband capability to more than 80 percent of its customer base. SBC estimates that this deployment will immediately enable at least 60 percent of its broadband customer base to have guaranteed download speeds of six megabits per second (Mbps), with the remainder having guaranteed speeds of 1.5 Mbps or more. Further improvements in these speeds are expected as technology advances.

To achieve this kind of broadband penetration, SBC will place or upgrade approximately 25,000 remote terminals at an average cost of approximately \$86,000 each. These next-

generation remote terminals are also referred to as "neighborhood broadband gateways." Fiber backbones will be deployed to connect these neighborhood broadband gateways to about 1,400 central offices throughout SBC's 13-state territory. Fiber, as well as costs for systems and other requirements, is estimated to average about \$1.7 million per central office.

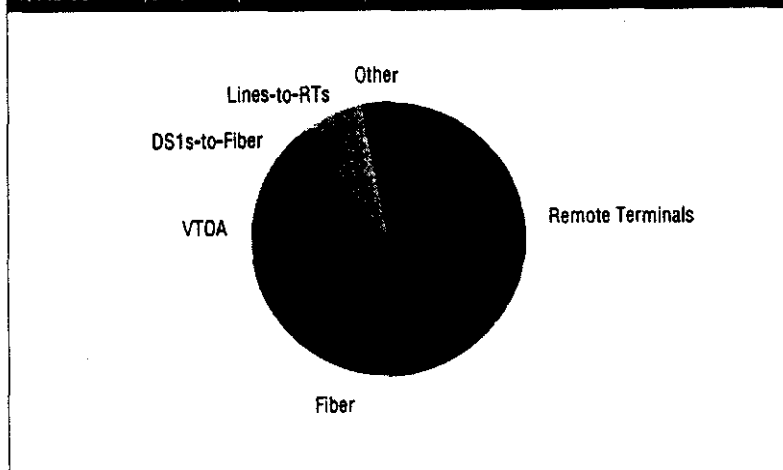
The deployment of fiber and next-generation remote terminals will enable SBC to overcome loop-length and line condition limitations in its network. While one immediate advantage of this deployment is the broader availability of ADSL, it also gives SBC the flexibility to react efficiently and effectively to

continuing technological improvements and market developments. Planning includes deployment scenarios for VDSL or APON (ATM Passive Optical Network) technology to address customers' television entertainment needs, as these platforms become technically and financially feasible.

Other Network Infrastructure

SBC intends to spend an additional \$1.8 billion to upgrade other portions of its network in order to improve efficiency. Forty percent of this investment is targeted for a technology that SBC is pioneering called Voice Trunking over ATM, or VTOA.

Network Infrastructure Capital Spending
(Breakdown of \$6 billion capital investment)



New Broadband Products

HDSL: A symmetrical 1.5 Mbps DSL service that is ideally suited for video conferencing or collaborative computing.

Access Advantage Plus: Provides a customer with DS1 or DS3 channelized service allowing the integration of voice and data on one single facility. The DS1 service provides up to 24 DS0 channels to which a menu of products can be connected. The DS3 service provides up to 28 DS1 channels to which a menu of products can also be connected.

Switched Virtual Circuit (SVC): A capability for ADSL subscribers that enables the user to accommodate multiple connections on the personal computer. Users can establish a connection to an Internet Service Provider as well as a connection to a corporate LAN without having to change the PC software configuration and reboot the PC.

Voice Over ADSL (VoDSL): Expands on existing DSL service capabilities by providing up to 4 dedicated voice channels over the ADSL line and primary POTS line. VoDSL will provide a solution for our customers' current and future integrated voice and data needs. VoDSL will offer simplicity, flexibility, convenience and cost savings. In addition to these customer realized service benefits, VoDSL will provide potential infrastructure benefits that should enable SBC to reduce operating costs and improve its ability to scale and manage network services.

Splitterless DSL provides a full range of service, where the customers receive a drop shipment and return of the equipment. The equipment will consist of a modem, AC power supply, and filters. The filters would be custom made for line, low-pass microfilters for each device. The purpose is to filter out the frequency signals for voice, video, and data channels. This is done by wiring a splitter to the line to eliminate the need for a modem.

ter and the need for CPE installed by the customer. G.Lite is designed for international standard services. The use of G.Lite technology is part of SBC's ADSL offerings, which reduce the complexity of a system by eliminating the need for a modem and a special digital phone line. G.Lite rates voice and data at the same time. G.Lite technology does not require the use of customer installed equipment on each telephone and analog device, such as answering and fax machines. This is referred to as "plug and play" consumer installation.

VPOP Dial Access Service (VPOP-DAS): A cost-effective solution to modem pooling, VPOP-DAS provides for the termination of calls and interconnection to the SWBT network of Data Service Providers (DSPs). SWBT owns, maintains and monitors the modems and associated equipment. Dial Access Service allows SBC's Data Service Provider customers to receive multiple calls from end users with analog and ISDN lines, transport data traffic to single location via SBC's Frame Relay service, and avoid deployment of DSP owned modems and related equipment.

Tramit Aggregation Services (TAS) Provides a complete transport solution for DSPs or businesses that are interested in purchasing volume DSP and VPO. TAS's service provides the customer increased flexibility in defining their mix of customers while making it easier to manage hundreds/thousands of incoming DSP/VPO-DAS connections. Service components include:

Aggregate DSL subscribers and deliver them over ATM using GDM, running on virtual circuits to permit specific subscribers.

Adopting a subscriber training system works well for companies that have a large number of business customers. For example, one computer manufacturer provides a training program for its network sales staff. The staff is then directed to the program every time they discuss a new product.

customized solutions to clients' unique needs, including specialized financial arrangements and tax planning. Financial professionals

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ing or stranding sites with substantial TDM investment.

Virtual Point Of Presence (VPOP) CES Service: Allows Internet Service Providers (ISPs) to establish virtual POP locations in any region for LATA-wide transport of dial-up Internet traffic. Traffic from multiple areas can be aggregated onto single ATM connections. Even Frame Relay traffic can be converted to ATM. Using the FRATM-Service Interworking (FRATM-SI) Enhancement.

Enterprise VPN: Enables large and medium business customers to establish a Virtual Private Network (VPN) via the Secure Internet Protocol (IP) network. Events are differentiated from traditional Internet access by enhanced security and performance guarantees. Standard

Designed for Dial Access Customers, this architecture of access to the network through a Frame Relay ADR or leased line connection (ISDNs - 622Mbps) or via dial access using an analog modem or an ISDN connection. This service backbone provided on a shared basis via a routed network backbone with a core that is based on Cisco's IOS.

Performance Level Guarantees are higher than those in the public Internet.

Enterprise security accomplished with firewalls, tunneling, and encryption, offering better security than available today's Internet.

Options available include network-based applications, LAN support, and desktop communications and applications software.

Online Office: Targets medium- and small-businesses with packages of

Network Hosted Applications — A subset of network hosted applications in this package will include web hosting and e-mail. Subsequent applications will include e-commerce, calendar and scheduling, salesforce automation and other business software (e.g., accounting, HR, etc.).

• **LAN support:** LAN installation, maintenance, and repair in support of an

Support for the
desktop version of the desk-
top application from the Online Office.

Complete Available — Desktop applications support.

VTOA involves the scheduled and sequenced replacement of standard circuit-switch tandems with packet-based ATM switches within the core of the network. It's one of the first technologies being planned for wide deployment in order to make convergent voice and data networks practical. SBC intends to begin field trials in 2000 in Houston and Los Angeles.

Once the trials prove successful, the ensuing deployment would be one of the largest of its type. The convergence of voice and data backbones will significantly increase network efficiency and scalability by allowing SBC to transport voice traffic the same way as data — via packets — and with the same level of call quality

and reliability that SBC provides today.

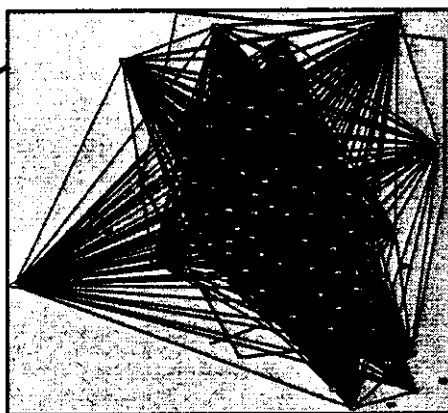
TRI, the company's research-and-development arm, has been testing VTOA exhaustively under real-life conditions. Their extensive analysis of SBC's Houston network, for example, revealed that the transition to VTOA should reduce the number of tandem switches required from four to one, resulting in a 74-percent reduction in trunk groups.

The company expects to convert 34 of 109 existing tandems to ATM-distributed tandems. Implementing VTOA also would enable SBC to avoid the forecasted deployment of 21 additional tandems in the next seven to 10 years.

Other infrastructure investments are planned to improve network efficiency. One-fourth of the \$1.8 billion targeted for network efficiency initiatives will be dedicated to upgrading a significant number of locations currently served via copper-based DS1s to new, lower cost fiber facilities. Another 25 percent will be targeted for moving existing

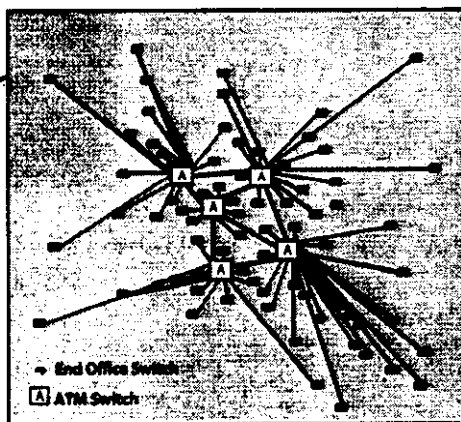
Houston Network Present VTOA

4 tandems
Approximately
500K trunks
76 end offices
2,700 trunk
groups



Houston Network Future VTOA

2003
1 VTOA tandem
Approximately
464K trunks
76 end offices
700 trunk
groups



voice lines to new fiber-fed remotes. The remaining 10 percent will be targeted for upgrading the overall condition of the network.

Cost Structure of Network

SBC's new network investments will have a profound impact on its cost structure; in fact, the efficiencies SBC expects to gain will pay for the cost of the deployment on an NPV basis. These efficiencies are conservatively targeted to yield annual savings of about \$1.5 billion by 2004 (\$850 million in cash operating expense and \$600 million in capital expenditures).

Expense Savings

The new loop infrastructure, with the additional dedicated feeder capacity the fiber provides, will substantially reduce the need to rearrange outside plant facilities when installing new or additional services. By avoiding dispatches on many installations, SBC expects to realize efficiencies in its installation and maintenance operations. Other anticipated efficiencies will

come from reduced activity required in the remaining copper plant because of improved reliability. A fiber-based distribution network is expected to be less vulnerable to weather conditions, thereby reducing trouble reports.

In some cases SBC is making investments in new technologies to dramatically reduce the cost of supporting future growth. A good example is the company's plan to move most of its copper-based DS1s to fiber at certain locations. With the fiber in place, the cost of providing additional bandwidth via electronics will be significantly less than adding more copper lines. Reducing the number of copper-based DS1s has the added benefit of eliminating a source of interference, which will make more the remaining copper-based facilities available for DSL service. In other cases, such as the plan to replace existing circuit-switched tandems with new fast packet technologies, costs associated with future growth as well as maintenance expenses will be reduced.

Capital Savings

Savings in capital expenditures for feeder, trunking and provisioning are targeted as a result of the network investments. Reduced spending on feeder facilities represents 70 percent of the targeted capital savings. The broad deployment of fiber and related electronics will substantially eliminate further deployment of copper facilities for feeder reinforcement. The balance of the capital savings comes from the reduced need for trunking capital, from lower provisioning costs for high-growth services, such as DS1s, and from other improvements in the distribution plant.

Revenue Opportunity

SBC expects its broadband initiative to dramatically improve its ability to deeply penetrate the growing market opportunity for broadband services, especially in the consumer and small and medium business markets. DSL services alone are targeted to add approximately \$3 billion to annual revenue within the next five years,

with another \$500 million coming from other new or replacement products. This \$3.5 billion revenue opportunity represents an additional 100 basis points in top-line growth by 2004.

The investments in fiber feeder and next-generation remote terminals are designed to eliminate loop length and network condition limitations, allowing SBC to meet the ultimate objective of bringing broadband capability to substantially all of its customers. In fact, SBC expects to reach more than 80 percent of its customer locations beginning in 2002. SBC expects to reach 35 million customer locations with broadband service in three years.

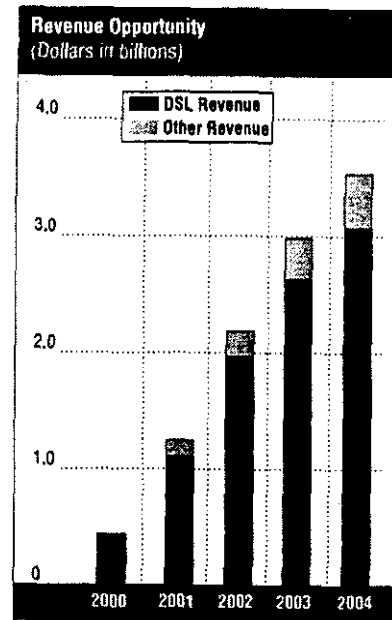
The ability to offer and promote broadband services to all customers has significant advantages. Network improvements will eliminate the need to "qualify" a customer for DSL services, making citywide promotions far more effective. Likewise, SBC expects that broadband services will be an integral part of its bundled

telecom services. Marketing and promoting bundles that include broadband services will be far more successful in a network environment that is free of concerns regarding customer distance limitations or network disturbers.

SBC's goal is to achieve at least a 50-percent share of the total broadband market penetration.

(The broadband market is defined as that portion of SBC customer locations that have the capability to receive landline-based broadband services from one or more providers.) By 2003, SBC expects market penetration to be approximately 30 percent; that is, slightly less than a third of the broadband capable customers will subscribe to some form of broadband access. SBC expects that the broadband market and market penetration will grow to at least half of the customer locations equipped with broadband capability within 10 years.

The size of the broadband market and SBC's objective to



achieve 50 percent of this market penetration implies a DSL subscriber base of more than 6 million by 2004, and more than 10 million before 2009.

With this new architecture, asymmetrical 6 Mbps service will be initially available to 60 percent of the broadband market. And, HDSL (a 1.5 Mbps symmetrical product) will be available to all customers reached with this new architecture. These two new services are estimated to account for about 10 percent of the total projected DSL demand and 25 percent of the revenue opportunity. Other products such as distance learning, video confer-

encing, remote management, web hosting and server hosting represent additional revenue opportunity.

SBC is also targeting at least an additional \$500 million net revenue opportunity by 2004 from other new or replacement products. These products include switched virtual circuit, voice over DSL, and VPOP-DAS (see page 5 for details on these and other products). SBC's new network architecture and its broadband capabilities also position the company to seize additional revenue from new Internet and data-related products that will continue to evolve over the coming

months and years.

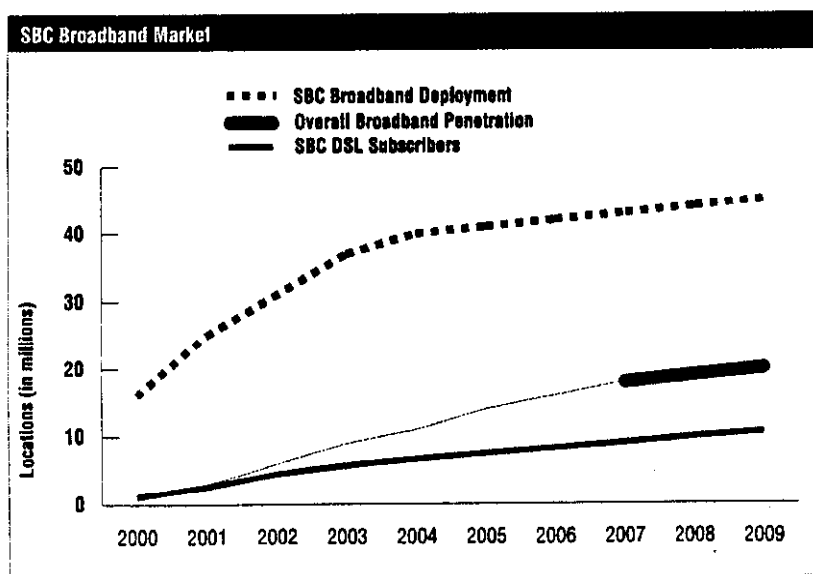
Several of the products enabled by network improvements may be substitutable for existing products, particularly in the business market. For example, voice over ADSL could reduce demand for business lines and 1.5 Mbps symmetrical service could be a substitute for T1s in certain instances.

Dynamic, data-oriented growth in the business market has fostered a migration toward higher bandwidth services — services that are often aggregated on bigger and bigger "pipes." In the second quarter of 1999, for example, VGEs grew 16.6 percent, driven by strong demand for DS1s and DS3s.

SBC's planning is based on the expectation that business VGEs will continue to grow strongly, fueled by the movement to higher, more efficient broadband capabilities and the integration of voice and data on a single facility. The broadband deployment initiatives will expand the availability of attractive, high-speed services to customers, and improve SBC's competitive position. By having the capability in its network to efficiently offer services such as symmetrical 1.5 Mbps DSL to a much broader market, SBC is positioned to grow business revenues with attractively priced, high bandwidth, competitive products. Additionally, cost structure improvements will give SBC the flexibility to economically respond to continued changes in the marketplace.

Financial Implications

As previously described, the fixed capital required to implement these initiatives is expected to be \$6 billion. SBC plans to deploy



this capital during the next three years, with almost 75 percent targeted for spending in 2000 and 2001. With current operating cash flows in excess of \$15 billion, the company has plenty of capacity to fund this investment within its existing capital structure. SBC is evaluating whether the network initiatives will result in a write-down to the carrying value of portions of its copper network, especially the local loop. This evaluation, including quantification of any write-down, will be completed in December 1999.

Given the nature of the network deployment, related cash operating expenses should be modest, and within the parameters for merger synergy investments projected at the time of the original Ameritech acquisition announcement. These expenses include developing or modifying operational support systems; staffing, equipping and training field forces for the project; and, rolling circuits from the old network to the new. They should be about 10 percent of the capital spent per year.

The annual cost structure improvements associated with the new network architecture are targeted to reach \$1.5 billion by 2004 (\$850 million in cash operating expense and \$600 million in capital). With the network improvements paying for themselves on an NPV basis, SBC has an outstanding opportunity to create shareowner value through new revenue opportunities. SBC conservatively targets new annual revenue opportunities to exceed \$3.5 billion by 2004, most of which relates to DSL service

Asynchronous Transfer Mode (ATM)

Asynchronous Transfer Mode (ATM) is a cell-relay service that provides high-speed information transfer capability and near real-time multimedia communications among multiple locations. ATM services can be deployed both on a local basis as a private area network (LAN) and on a wide-area basis as a backbone network for connecting LANs to form wide-area networks (WANs). ATM services range from 45 Mbps to 100 Mbps with plans in the works to speed up to 622 Mbps. ATM is suitable for many applications including local transport, wide-area transport, voice, data, video, textual images, CAD/CAM, collaborative computing and distance learning.

ATM provides users with both scalability and flexibility. It provides scalability by allowing for various rates of access speed and for allocation of bandwidth to specific needs. It provides flexibility by supporting a wide range of services over a wide area, including frame relay. Considering these attributes, as well as its current availability, ATM is viewed as the logical first step in moving from a circuit-based network to a packet-based network.

The most significant benefit of ATM is its uniform handling of services, allowing one network to meet the needs of many broadband services. ATM accomplishes this because its cell-switching technology combines the best advantages of both circuit switching (for constant bit-rate services such as voice and image) and packet switching (for variable bit-rate services such as data and full-motion video) technologies. The result is the bandwidth guarantee of circuit switching combined with the high efficiency of packet switching.

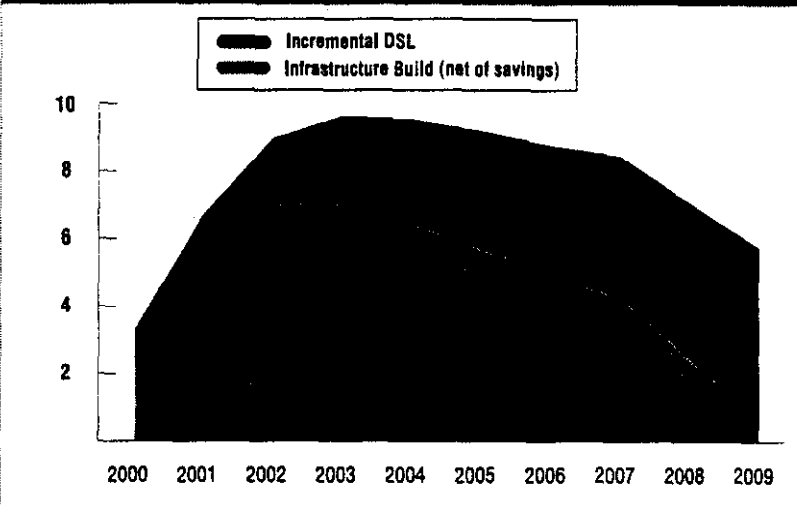
offerings. Revenue growth is targeted to improve 100 basis points by 2004 as a result of the expanded broadband opportunity.

SBC's planning guidelines assume a two-year payback period per DSL customer by 2004. On a per-subscriber basis, DSL products are expected to require incremental capital — for the DSLAM and equipment at the customer

premise — of just under \$500. Customer acquisition costs are targeted at \$350 per subscriber. Recurring EBITDA per month is targeted at \$35. These per-subscriber metrics assume cost improvements over the next five years, as well as price reductions.

The overall earnings impact associated with DSL and other revenue opportunities from Project

Cumulative Incremental CAPX
(Dollars in billions)



Pronto is about 6 to 8 cents dilution in 2000; less than half that amount in 2001; and net-income positive by 2002.

In summary, SBC's new broadband platform and greatly expanded broadband revenue potential give SBC the opportunity to create significant shareowner value — well in excess of \$10 billion NPV. The

underlying strategic and financial rationale for these initiatives is compelling. These initiatives provide SBC with superior positioning to address exploding customer demand for high bandwidth services from every perspective — time-to-market, products, capability, technology and cost structure.

Cautionary Language Concerning Forward-Looking Statements

Information set forth in this document, including this Investor Briefing, contains certain forward-looking statements and consumer demand estimates. These forward-looking statements and consumer demand estimates are based on current expectations and assumptions. SBC disclaims any obligation to update or revise such statements or estimates contained in this document. SBC's actual performance may differ from the forward-looking statements and consumer demand estimates contained in this document.

SBC Investor Briefing

SBC Investor Briefing is published by the Investor Relations staff of SBC Communications Inc. Requests for further information may be directed to one of the Investor Relations managers by phone (210-351-3327) or fax (210-351-2071).

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